

(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
VERKAMA, Markku

Confirmation No.: 9392

Application No.: 09/830,028

Filed: August 15, 2001

Art Unit: 2617

For: DIGITAL TELECOMMUNICATION SYSTEM

Examiner: IQBAL, Khawar

**APPEAL BRIEF**

**MS APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA. 22313-1450

Dear Sir:

As required under 37 C.F.R. § 41.37(a), this brief is due on Monday, March 2, 2009, i.e., one month from mailing date of the Notice of Panel Decision from the Pre-Appeal Brief Review on January 28, 2009. This Brief is in furtherance of the Notice of Appeal submitted on July 29, 2008 filed in response to the Final Office Action mailed May 29, 2008. No extensions of time are due with this Brief.

The Director is authorized to charge the \$540.00 fee for filing a brief in support of appeal pursuant to 37 C.F.R. §41.20(b)(2). The Director is further authorized to charge any additional fees that may be due or credit any overpayment to Deposit Account No. **03-3975** under ref. no. 060258-0284060 from which the undersigned is authorized to draw.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

- |      |   |
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| I.   | Real Party In Interest                        |
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## **I. REAL PARTY IN INTEREST**

The real party in interest for this appeal is NOKIA SIEMENS NETWORKS OY, Espoo, Finland. Evidence of this interest is provided by way of an Assignment to NOKIA SIEMENS NETWORKS OY recorded in the U.S. Patent Trademark Office at Reel/Frame: 020837/0781.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

## **III. STATUS OF CLAIMS**

### **A. Total Number of Claims in Application:**

17 claims are pending, of which claims 1 and 14 are independent.

### **B. Current Status of Claims**

1. Claims canceled: NONE
2. Claims withdrawn from consideration but not canceled: NONE
3. Claims pending: 1-17
4. Claims allowed: NONE
5. Claims rejected: 1-17

### **C. Claims On Appeal: Claims 1-17**

## **IV. STATUS OF AMENDMENTS**

No amendments have been filed subsequent to the Final Office Action of May 29, 2008.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claims 1 and 17, as described below, include references and citations to the specification, drawings, and reference numerals. Citations in support of the claimed subject matter are made with respect to the page and line number in the format “page no.:line(s)”, i.e., p. x:ll.

Such description is intended to facilitate an understanding of the claims by the Board Members and is not intended as a comprehensive claim construction, such as used in the context of an argument of invalidity or infringement. Any reference to more than one reference number or character for any particular claimed element or limitation is illustrative only and is not to be construed as an admission that the claims are limited to any, or all, of the particularly disclosed embodiments.

**Independent claim 1**, as it currently stands, sets forth the following:

1. A digital telecommunication system comprising (*see Specification at p. 4:29-30; FIG. 1*):
    - (a) a first centre configured to enable speech communication between a plurality of terminals, the first centre being associated with a calling terminal and including a first transcoder unit; (*see Specification at p. 5:4-17; FIG. 1, WMSC(A), MS1, and TCU(A)*)
    - (b) a second centre configured to enable speech communication between a plurality of terminals, the second centre being associated with a called terminal and including a second transcoder unit, (*see Specification at p. 6:8-15; FIG. 1, WMSC(B), MS2, TCU(B)*)
- wherein at least one of the first and second centres comprises a mobile switching centre, (*see Specification at p. 5:4-5; FIG. 1, WMSC(A)*)

wherein the first and second transcoder units and each of the terminals include speech codecs, in which each of the speech codecs comprises an encoder unit and a decoder unit, *(see Specification at pp. 5:26-36 and 6:25-31)* and

wherein the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centres; *(see Specification at p. 5:26 through p. 6:4)*

(c) the first centre being configured to perform handshaking with the second centre, the handshaking including indication of the speech codecs supported by the calling terminal, *(see Specification at p. 5:26-33)*

wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals, *(see Specification at p. 6:32 through p. 7:9)* and

wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals *(see Specification at p. 6:16-31)*.

**Independent claim 14**, as it currently stands, sets forth the following:

14. A mobile switching centre in a digital telecommunication network configured to receive information regarding supported speech codecs of a calling terminal, each speech codec including an encoder unit and a decoder unit, and connect a transcoder located in a transcoder unit to a call connection when required, *(see Specification at p. 5:4 through p. 6:4; p. 6:16-31)* wherein:

the mobile switching centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the

centre also being configured to choose the speech codec commonly used by the terminals, (*see Specification at p. 5:26-33*) and

the mobile switching centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (*see Specification at p. 6:16-31*).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection submitted for review are those identified in the Final Office Action, as follows:

- A. Unpatentability rejection of claims 1-12 and 14-17 as allegedly being unpatentable over Tseng et al. (6,172,974) in view of Navaro et al. (6,108,560).**

Separate arguments for the patentability of independent claims 1 and 14 are not being presented herein, as these two independent claims stand or fall together.

- B. Unpatentability rejection of claim 13 as allegedly being unpatentable over Tseng et al. (6,172,974) in view of Navaro et al. (6,108,560) and Hellwig et al. (6,295,302).**

Separate arguments for the patentability of dependent claim 13 will not be provided, as claim 13 stands or falls with the allowability of independent claim 1.

## **VII. ARGUMENTS**

The prior art rejections are improper because the Examiner has not presented a *prima facie* case of obviousness with respect to the claims, and must fail for two reasons. First, none of the asserted references, whether taken alone or in combination, teach or suggest the entire claimed combination of elements.

Accordingly, Appellant respectfully traverses the rejections set forth by the Examiner. Secondly, neither a rational reason nor proper motivation to combine the references in the

manner suggested has been provided by the Examiner, since the references teaches away from the suggested combination.

- A. The Examiner has not made the required *prima facie* case for unpatentability of claims 1-12 and 14-17 under 35 U.S.C. §103(a) over Tseng et al. (6,172,974) in view of Navaro et al. (6,108,560).

1. Specific Deficiencies of Tseng & Navaro with Respect to the Claims

a. Independent Claim 1

The applied art, either alone or in combination, does not disclose, teach or suggest a digital telecommunication system that includes, *inter alia*, "...a first centre...associated with a calling terminal and including a first transcoder unit...a second centre...associated with a called terminal and including a second transcoder unit, wherein at least one of the first and second centres comprises a mobile switching center...***wherein the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centres...wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals***, and wherein at least one of the first and second centres is configured to ***establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals***," as recited in previously-presented independent claim 1 (*emphasis added*).

b. Independent Claim 14

In addition, the applied art, either alone or in combination, does not disclose, teach or suggest ***a mobile switching centre*** in a digital telecommunication network wherein, *inter alia*, ***"the mobile switching centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals***, and ***the mobile switching centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding***

*operations in such a way that speech encoding and decoding are only performed in the calling or called terminal,"* as recited in previously-presented independent claim 14 (*emphasis added*).

## **2. Discussion of the Final Rejection over Tseng and Navaro**

In the Final Office Action, the Examiner merely repeats his previously asserted rejections, and incorrectly alleges that Tseng discloses at col. 4:33-37 that the terminals indicate their supported speech codecs to their associated switching centers MSC/BSC. ***This assertion is clearly not true.*** In the passages of Tseng cited by the Examiner, Tseng merely discloses that a MS includes a codec and either a BSC or a MSC also includes a codec. Accordingly, and ***completely contrary to the Examiner's assertions, Tseng does not teach that a terminal would indicate its speech codecs to a switching center MSC.***

### **a. Discussion of Tseng**

Similar in some respects to the conventional approaches discussed in Appellant's background discussion on pages 1 and 2 of the present application, Tseng merely discloses a signaling method for achieving a tandem-free operation (TFO) in a mobile-to-mobile call (MMC) in a telecommunication system. The centers are arranged to transmit capability signals to each other to indicate that a particular center is capable of transcoding (or cross transcoding, if needed). Then, the transcoders are bypassed by sending low frequency tone signals to the opposite centers.

The Examiner further argues that Tseng discloses that the terminals indicate their supported speech codecs to their associated switching centers by referring to the tones indicating the type of transcoding or cross transcoding during network setup (col. 5:33-65, col. 9:40-65). Appellant again traverses this clear mischaracterization of Tseng. ***The cited passages of the Tseng reference merely disclose that the centers (i.e., MSC/BSCs) indicate to each other whether they are capable of transcoding, and then the transcoders are bypassed by sending LF tone signals to the opposite centers.***

Accordingly, Appellant submits that ***Tseng is completely silent with respect to providing any teaching or suggestion of any activity in which a terminal would indicate its speech codecs to a switching center, or in which a terminal would even have occasion to indicate its speech codecs to a switching center.***

Since, in stark contrast to Appellant's variously claimed invention, Tseng does not disclose that a terminal would indicate its speech codecs to a switching center, it can be unambiguously concluded that *the terminals of Tseng also do not participate in the selection of inter-MSC coding, and are incapable of participating in the selection of inter-MSC coding.*

The Examiner correctly admits that Tseng does not disclose that at least one of the first and second centers is configured to choose the speech codec used commonly by the calling and called terminals, but incorrectly asserts that Navaro teaches this feature at col. 8:5 through col. 9:5. Appellant traverses this alleged teaching of Navaro.

**b. Discussion of Navaro**

Navaro makes it clear (see, e.g., col. 9:3-5) that *the choice of the codec is an internal process for the BSS (Base Station Subsystem)*, i.e., *the MSC does not participate in choosing the speech codec* used commonly by the calling and called terminals. Appellant submits that it is generally known that a base station system (BSS) comprises a base station controller (BSC), a plurality of base transceiver stations (BTS), and a transcoder and rate adapter unit (TRAU). Navaro further discloses that, for choosing a common codec, the BSC provides a list of codecs and the codec version of the MS to the TRAU (see col. 8:7-10). Then the TRAUs of the opposite sides negotiate with each other in order to find a common codec. Thus, *Navarro does not disclose, teach or suggest any centers which would choose the speech codec used commonly by the calling and called terminals.* Furthermore, Navaro does not teach, suggest, or even provide so much as a hint that the terminals would indicate their supported speech codecs *to their associated switching centers, i.e., MSC's.*

Accordingly, a combination of Tseng with Navaro does not disclose, teach, or suggest all the limitations of independent claims 1 and 14 and, further, a person of ordinary skill in the art would not be motivated to combine Tseng with Navaro to arrive at Appellant's claimed invention, as discussed below.

This conclusion is supported by the fact that both Tseng and Navaro concentrate purely on tandem-free operation (TFO), and for the specific reason that the transcoders are *always* a part of the transmission path, and for a mobile-to-mobile call, they *must* be separately switched off.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 1 and 14 are respectfully requested. In



addition, dependent claims 2-13 and 15-17 variously and ultimately depend patentable independent claim 1, and are submitted as being allowable at least on that basis, without further recourse to the patentable features recited therein.

### 3. Tseng “Teaches Away” from the Claimed Invention

As further evidence of the impropriety of the Examiner's rejection, and even assuming, *arguendo*, that the applied art, either alone or in combination, teaches or suggests all the limitations recited in the independent claims (which it does *not*), a person with skill in the art would not have a rational reason to combine Tseng with Navaro in the manner suggested by the Examiner, because Tseng teaches away from Appellant's invention as recited in independent claims 1 and 14. Only through the use of improper hindsight analysis would these references be looked upon to derive Appellant's novel and non-obvious invention, as claimed.

Even assuming that Tseng indicates its speech codecs to a switching center or that Tseng would even have occasion to indicate its speech codecs to a switching center, which it does not, ***such an indication would be futile in the system of Tseng***, since Tseng discloses inter-system (GSM/TDMA/CDMA) TFO operations, in which the speech codecs of the terminals are system-***dependent***, *i.e.* the respective switching center is ***always*** aware of speech codecs supported by the terminals. ***Hence, there clearly would be no need to indicate the speech codecs supported by the terminals to the switching centers because they must necessarily be known in advance.*** Further, since Tseng has no need for a terminal to indicate its speech codecs to switching center, it can be unambiguously concluded that the terminals of Tseng absolutely do *not* participate in the selection of inter-MSC coding, contrary to the recitations of Appellant's claimed invention.

In stark contrast, Appellant's invention as claimed in independent claim 1, for example, recites that the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centers, and at least one of the first and second centers is configured to choose the speech codec used commonly by the calling and called terminals. Accordingly, Appellant submits that Tseng would have lead a person skilled in the art away from the invention claimed in at least independent claim 1 and dependent claims 2-13 and 15-17. Similar arguments pertain to independent claim 14. Therefore, the claims on appeal should be allowed on this additional basis.

### **VIII. CONCLUSION**

For at least the foregoing reasons, it is respectfully submitted that claims 1-17 are not rendered obvious by any combination of the references applied under 35 U.S.C. §103(a). Accordingly, Appellants respectfully request the Honorable Board to reverse the rejection of these claims and direct that the claims be passed to issue.

The following appendices to this Brief are provided, as required under the Patent Rules:

Appendix A Claims on appeal (claims 1-17)

Appendix B Evidence (NONE)

Appendix C Related Proceedings (NONE)

Due Date: Monday, March 2, 2009

Respectfully submitted,

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Appendix A Claims

Appendix B Evidence

Appendix C Related Proceedings

**APPENDIX A**

**Claims Involved in the Appeal of Application Serial No. 09/830,028**

1. A digital telecommunication system comprising:

(a) a first centre configured to enable speech communication between a plurality of terminals, the first centre being associated with a calling terminal and including a first transcoder unit;

(b) a second centre configured to enable speech communication between a plurality of terminals, the second centre being associated with a called terminal and including a second transcoder unit,

wherein at least one of the first and second centres comprises a mobile switching centre,

wherein the first and second transcoder units and each of the terminals include speech codecs, in which each of the speech codecs comprises an encoder unit and a decoder unit, and

wherein the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centres;

(c) the first centre being configured to perform handshaking with the second centre, the handshaking including indication of the speech codecs supported by the calling terminal,

wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals, and

wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without

performing speech encoding operations so that speech is encoded and decoded only in the terminals.

2. The telecommunication system of claim 1, wherein the telecommunication system is a mobile communication system in which the terminals include mobile stations, and the telecommunication system further comprises a mobile communication network.

3. The telecommunication system of claim 1, wherein:

the mobile switching centre includes a subscriber database configured to maintain subscriber data associated with a mobile subscriber, and the subscriber data includes information indicating the speech codecs supported by a mobile station associated with the mobile subscriber.

4. The telecommunication system of claim 1, wherein the handshaking is performed as outband signalling.

5. The telecommunication system of claim 4, wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry issued in response to a determination that the called terminal is a mobile subscriber.

6. The telecommunication system of claim 5, wherein:

the first centre is configured to send the routing information inquiry including information associated with the speech codecs supported by the calling terminal,

the second centre is configured to select a speech codec to be associated with the call connection which the calling and called terminals are configured to support, and

the second centre is configured to send information associated with the speech codec associated with the call connection in a reply message to the routing information inquiry.

7. The telecommunication system of claim 6, wherein the routing information inquiry and reply message to the routing information inquiry are configured to pass via a home database of the called terminal.

8. The telecommunication system of claim 4, wherein the first and second centres are configured to perform the handshaking in association with inter-MSC signalling.

9. The telecommunication system of claim 8, wherein:

the first centre is configured to send a message requesting connection set-up, the message including information indicating the speech codecs supported by the calling terminal,

the second centre is configured to select a speech codec associated with the call connection which both the called and calling terminals are configured to support, and

the second centre is configured to send information associated with the codec associated with the call connection, in a reply message to the connection set-up message.

10. The telecommunication system of claim 1, wherein, when required, at least one of the first and second centres is configured to notify the associated terminal of the speech codec it has to use as the result of the handshaking.

11. The telecommunication system of claim 10, wherein at least one of the first and second centres is configured to notify the associated terminal of the speech codec to be used if it is not a default speech codec of the associated terminal.

12. The telecommunication system of claim 1, wherein:

a pulse code modulated digital link exists between the first and second centres, and

the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding.

13. The telecommunication system of claim 1, wherein:

the system is configured to support a packet-switched link between the first and second centres, and

the first and second centres are configured to connect a call connection that bypasses at least one of the transcoder units.

14. A mobile switching centre in a digital telecommunication network configured to receive information regarding supported speech codecs of a calling terminal, each speech codec including an encoder unit and a decoder unit, and connect a transcoder located in a transcoder unit to a call connection when required, wherein:

the mobile switching centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals, and

the mobile switching centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal.

15. The telecommunication system of claim 8, wherein the inter-MSC signalling is ISUP signalling.

16. The telecommunication system of claim 8, wherein the message requesting connection set-up is an IAM message according to ISUP signalling.

17. The telecommunication system of claim 8, wherein the reply message to the connection set-up message is an ANM message according to ISUP signalling.

**APPENDIX B**

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the Examiner is being submitted.

**APPENDIX C**

No related proceedings are referenced in Section II of this Brief. above, hence copies of decisions in related proceedings are not provided.